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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt (WO 2003/035777), see English language equivalent (Schmidt US 2005/0142292).

Regarding claims 1-8 and 24, Schmidt teaches curable inks for intaglio printing initiated by actinic radiation (Abstract, Title, [0001]), comprising polymerizable acrylates ([0026]) and a radical forming photoinitiator being a phosphine oxide ([0045]).

Regarding the limitation drawn to the fluorescence of the ink in the visible light region when exposed to ultraviolet light, although the reference does not explicitly teach the fluorescence of the ink, the radiation curable binding agent system, the vinyl ether, and the coloring agent (such as the respective components in the ink of Ex. 4) do not fluoresce when exposed to ultraviolet light. Furthermore, wherein the photoinitiator is 2,4,6-trimethylbenzoyl diphenylphosphine oxide or bis(2,4,6-trimethylbenzoyl) phenylphosphine oxide or bis(2,6-dimethoxybenzoyl)-2,4,4-trimethyl-pentyl phosphine oxide ([0045]), the composition as a whole does not fluoresce, as these photoinitiators

do not fluoresce in the visible light region when exposed to ultraviolet light.

Furthermore, the Office realizes that all the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed reagents. Therefore, the claimed effects and physical properties, i.e. no fluorescence in the visible light wavelength region when exposed to ultraviolet light, would inherently be achieved by a composition with all the claimed ingredients. If it is the applicants' position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects with only the claimed ingredients.

Claims 9-17 and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmidt (WO 2003/035777), see English language equivalent (Schmidt US 2005/0142292).

Regarding claims 9-17, 22 and 23, Schmidt teaches a method of intaglio printing on a film ([0059]), wherein the ink is initiated by actinic radiation (Abstract, Title, [0001]), comprising polymerizable acrylates ([0026]) and a radical photoinitiator being a phosphine oxide ([0045]) and is UV cured after printing ([0059]). Regarding the limitation drawn to the fluorescence of the ink in the visible light region when exposed to ultraviolet light, although the reference does not explicitly teach the fluorescence of the ink, the radiation curable binding agent system, the vinyl ether, and the coloring agent (such as the respective components in the ink of Ex. 4) do not fluoresce when exposed

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to ultraviolet light. Furthermore, wherein the photoinitiator is 2,4,6-trimethylbenzoyl diphenylphosphine oxide or bis(2,4,6-trimethylbenzoyl) phenylphosphine oxide or bis(2,6-dimethoxybenzoyl)-2,4,4-trimethyl-pentyl phosphine oxide ([0045]), the composition as a whole does not fluoresce, as these photoinitiators do not fluoresce in the visible light region when exposed to ultraviolet light. Furthermore, the Office realizes that all the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed reagents. Therefore, the claimed effects and physical properties, i.e. no fluorescence in the visible light wavelength region when exposed to ultraviolet light, would inherently be achieved by a composition with all the claimed ingredients. If it is the applicants' position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects with only the claimed ingredients.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (WO 2003/035777), see English language equivalent (Schmidt US 2005/0142292), as applied to claim 9 above, and in view of Veya et al (US 2004/0029989).

Regarding claims 18 and 19, Schmidt teaches the basic claimed method [as set forth above with respect to claim 9] printed onto plastic films [0059].

Schmidt does not teach the printing method wherein the substrate is paper or the document produced is a security document [instant claims 18 & 19]. However, Veya et al disclose a UV curable intaglio printing ink (Title) wherein the ink contains a radical forming photoinitiator ([0043]) and polymerizable acrylates ([0024]-[0025]). Furthermore the reference teaches that "security documents are printed preferably by the intaglio printing process", wherein it is printed on paper ([0001]-[0004]). Schmidt and Veya et al are combinable because they are concerned with similar technical difficulty, namely UV curable intaglio printing inks. At the time of invention a person of ordinary skill in the art would have found it obvious to produce security documents on paper, as taught by

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Veya et al, using the UV curable intaglio printing method of Schmidt and would have been motivated to do so in lieu of its common and preferable use evidenced by Veya et al.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (WO 2003/035777), see English language equivalent Schmidt US 2005/0142292, in view of Veya et al (US 2004/0029989), as applied to claim 19 above, and further in view of Ghioghiu et al (WO 2001/38445).

Regarding claim 20, Schmidt and Veya et al render the basic claimed method obvious [as set forth above with respect to claim 19].

Schmidt does not teach the printing method wherein the security document produced is a banknote [instant claim 20]. However, Ghioghiu et al disclose a UV curable intaglio printing ink (Abstract) wherein the ink contains a radical forming photoinitiator (P7/L8 see Irgacure 184) and polymerizable acrylates (P5/L10-15). Furthermore the reference teaches that the intaglio printing technique is well-known, produces high quality raised images and can be used to make banknotes (P1/L13-15). Schmidt and Ghioghiu et al are combinable because they are concerned with a similar technical difficulty, namely UV curable intaglio printing inks. At the time of the invention a person of ordinary skill in the art would have found it obvious to produce banknotes, as taught by Ghioghiu et al, using the UV curable intaglio printing method of Schmidt and would have been motivated to do so in lieu of its common use and the attributes of intaglio printing disclosed by Ghioghiu et al.

Response to Arguments

The IDS objections, Oath/declaration objections, claim objections and 35 USC §112 claim rejections have been withdrawn, as the Applicant has corrected those errors.

Regarding Applicant's assertion that while the title of the patent uses the word 'intaglio', everything else in this reference [Schmidt] indicates the inks and printing are rotogravure and that intaglio and gravure are distinct types of inks and one skilled in the art would immediately recognize the use of the 'intaglio' in the title as a mistake and would ignore it (P16), Examiner disagrees. First Applicant asserts that rotogravure and intaglio printing are distinct. However many sources, including US 4,401,470 (1:55-57), teach rotogravure to be a type of intaglio printing, and a rotogravure ink being therefore an intaglio ink. Additionally, Applicant describes intaglio printing as applying an ink on an engraved surface, wiping the ink on the planar surface off, and passing the substrate between the engraved cylinder and an impression material, forcing the substrate onto the engravings filled with ink thus producing an image (P17). It is noted that Schmidt describes a very similar process of rotogravure printing, wherein ink is applied to a gravure roller, having cutouts, the excess ink is removed by a doctor blade, and the printing image is transferred on the substrate ([0054]-[0055]). Furthermore the Applicant highlights the rheology of the ink being critical to its success (P17), analogously Schmidt also describes the rheology of the ink to be very important ([0009], [0012], [0033]). In regard to the requirements an intaglio printing ink must meet, as

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disclosed by the Applicant, it is noted that the features upon which applicant relies (i.e., (1) they must remain on the engraved cylinder until the moment of printing . . . (P81)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In light of the arguments presented above it is the Examiner's position that the rotogravure ink used in Schmidt is an intaglio printing ink and anticipates the instant claims.

Regarding Applicant's claim that one must pick and choose a photoinitiator disclosed in Schmidt that meets the limitations of the instant claims, it is the Office's position that a reference that clearly names the claimed species anticipates the claim not matter how many other species are names (MPEP 2131.02). Schmidt teaches the ink containing a photoinitiator, and discloses 11 specific photoinitiators in paragraph [0045], three of those being of instant claim 8. Although Schmidt teaches 8 other photoinitiators, besides three of the initiators of instant claim 8, Schmidt anticipates the instant claims.

Regarding Applicant's argument that "the Office's assertion that the composition of Table 5, Ex. No.4, as not visibly fluorescing under UV light, its clearly speculation and is in fact wrong", it is brought to the attention of the Applicant that "as a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972). The declaration under 37 CFR 1.132 filed 08/12/2208 is insufficient to overcome the

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rejection of claim 1 based upon Schmidt as set forth in the last Office action. Although the declaration shows that the printing ink of Table 5, Ex No. 4, which contains Darcoure 4265, fluoresces in the visible wavelength under UV light, Schmidt teaches a radiation curable ink ([0019]) comprising a radiation curable binding agent system, a vinyl ether, a coloring agent, a radical photoinitiator and optionally additives ([0022]). Wherein the radiation curable binding agent, vinyl ether and coloring agent are any of those disclosed in the reference (particularly those of examples 4-9), and wherein the photoinitiator is any of the four phosphine oxide initiators disclosed in [0045], the composition does not fluoresce in the visible light spectrum when exposed to ultraviolet light. Additionally, although the embodiment of Ex. No. contains an initiator that fluoresces under UV light, it is well within the capabilities of one of ordinary skill in the art, to modify the ink such that it contains anyone of the disclosed phosphine oxide photoinitiators of paragraph [0045], thereby forming an ink that does not fluoresce in the visible light spectrum when exposed to ultraviolet light.

Regarding Applicant's assertion that nothing in Schmidt suggests that the resulting intaglio inks do not fluoresce in the visible region under UV light and nothing permits the skilled person to predict this surprising and unexpected result, it is the Office's position that something which is old does not become patentable upon the discovery of a new property (MPEP 2112 I.). Although Schmidt teaches UV curable intaglio printing inks that contain photoinitiators that do not fluoresce under UV light, and does not explicitly teach the inks having the property of not fluorescing under UV light, this limitation of the instant claim does not make the claim patentable.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA TREIDL whose telephone number is (571)270-3993. The examiner can normally be reached on Monday- Thursday, 7:30AM- 5PM EST, Alt. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner,
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